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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,206	07/24/2003	Harry Israel Ringermacher	120631-1	4236

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GENERAL ELECTRIC COMPANY		
GLOBAL RESEARCH		
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NISKAYUNA, NY 12309		

EXAMINER	
VERBITSKY, GAIL KAPLAN	

ART UNIT	PAPER NUMBER
2855	

MAIL DATE	DELIVERY MODE
10/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/627,206

Applicant(s)

RINGERMACHER ET AL.

Examiner

Gail Verbitsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-22,28 and 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) 15-22,28,30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____


DETAILED ACTION

1. In view of arguments set forth by applicant in the appeal brief filed on February 15, 2007, PROSECUTION IS HEREBY REOPENED.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below: 

Diego Gutierrez
Supervisory Patent Examiner
Technology Center 2800

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 15-20, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Front Flash thermal imaging characterization of continuous fiber ceramic composites.

3. Claims 15-20, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Front Flash thermal imaging characterization of continuous fiber ceramic composites. Article by Deemer et al. Jan, 25, 1999 [hereinafter Article 1] in view of Dennewitz (U.S. 3675074)

Article 1 discloses in Fig. 1 a thermography IR imaging device wherein a thermal pulse is applied with a photographic flash lamps heating an object/ sample, an IR camera configured to capture plurality of images/ frames, a shutter electronics (logic control) including: dual timing, TTL and Flash bank (actively quenching means) configured to shut the flash lamps and thus, to actively cool them. It is inherent, that the lamps are **off** for some period of time, and **on** for some (other) period/ duration of time.

Although it is known in the art that any device should have an initial control to initiate an action (i.e., power on/ off), Article 1 does not explicitly teach a control signal T2, in combination with the remaining limitations of claims 15-20 and 24. Article 1 does not explicitly teach to quench the lamp so as to control the lamp duration.

Dennewitz discloses in Fig. 1 a device operating as a timing controller/ timing generator to control duration of a flash lamp, the device comprising a first time/timer and a second time/ timer, the first time (T0) controlling an operating mode (control operating mode duration) of a (illuminating) lamp, and the second time (T2) controlling a cooling mode (control) the lamp. There is a power switching means/ device/ Schmitt trigger for providing power, and thus, inherently, voltage/ current to the lamp during the operating mode and removing power from the lamp during cooling mode. Power is applied to the lamp and the first timer of the timing controller is initialized and the lamp is at its operating mode. The switching device is, inherently, controlled by a control circuit (drive) and supplies a lamp trigger signal (T1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the logic control, disclosed by Article, so as to have a cyclic heating and cooling control of the flash lamp), as taught by Dennewitz, so as to prevent the lamp

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overheating and provide a proper operation so as to prolong the lamp's life, as very well known in the art.

4. Claims 21-22 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Article 1 and Dennewitz as applied to claims 15-20 and 24 above, and further in view of INTEGRATED GATE-COMMUTATED THYRISTORS. Article by Carroll et al. [hereinafter Article 11]

Article 1 and Dennewitz disclose the device as stated above in paragraph 2.

They do not explicitly teach that the switch is a power semiconductor switch/ an insulated gate bipolar transistor.

Article 11 teaches to use a power semiconductor switch such as IGCT or MOSFET or IGBT since they have very good performance in power and temperature cycling.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the switching device disclosed by Article 1 and Dennewitz with a switching device, as taught by Article 11, because power semiconductors known as IGCT have high speed and reliability, as already suggested by Article 11, and thus high performance ensuring a high accuracy of cooling the illuminating device.

Response to Arguments

5. Applicant's arguments, filed 02/17/2007, with respect to the rejection(s) of mailed on October 18, 2006 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Dennewitz.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Ina et al. U.S. 20020081111A1 teach in paragraph [0028] quenching a flash or timing the flash (control flash duration).

Yamada U.S. 4021698 teaches quenching a flash to watch (control) the flash duration.

Adams et al. U.S. 4831410 teach quenching a flash to control flash duration.

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EP 000773469A1 teach automatically quenching a flash to control the flash duration.

Any inquiry concerning this communication should be directed to the Examiner
Verbitsky who can be reached at (571) 272-2253 Monday through Friday 8:00 to 4:00 ET.

GKV

Gail Verbitsky

Primary Patent Examiner, TC 2800



September 25, 2007